



First record of *Brachynotus atlanticus* Forest, 1957 (Decapoda, Varunidae) from Syrian coast

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General Note

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ABSTRACT

In Syrian coastal water, the number of species that are registered for the first time from various taxonomic units is growing; most of which are non-Mediterranean and belong to warm water species. One specimen of the brachyuran crab *Brachynotus atlanticus* Forest, 1957, were collected by hand from the Al-shokaifat littoral zone (Syrian coast) on a sandy gravel shore in May 2019. It is the first record of this western Atlantic species from the Syrian coast and Eastern Mediterranean.

Keywords: Crustaceans, First record, Alien species, Varunidae, Brachynotus

1. INTRODUCTION

The most recent data on the diversity of crustaceans in the Syrian coast indicate that there are more than 100 species of Malacostraca. Most of them belong to the Atlantic Ocean fauna, 23% of which are considered to be an alien or a lessepsian immigrant (Hasan et al., 2008; Ammar, 2019).

Recording the presence of species for the first time is continuous and this may be due to several reasons; most importantly is the proximity of the Syrian coast to the Suez Canal, as well as the active shipping traffic, especially the oil tankers' traffic from the West Atlantic and other oceans (Ammar & Arabia, 2018; Ammar & Raya, 2019).

Many of these new recorded species, originating in both the Indian and Pacific oceans, reached the Mediterranean Sea through the Suez Canal, clearly contributing to the biodiversity of the eastern Mediterranean basin (Mannino et al., 2017; Zenetos et al., 2017). With an increasing interest in this phenomenon, the identification of invasive species, especially those originating from the tropical Atlantic zone, has also been reported repeatedly as a result of natural invasion across the Straits of Gibraltar or human activities (accidental or intentional) (Galil et al., 2002; Azzurro et al., 2014; Mannino et al., 2017).

The objective of this paper is to describe and report of *Brachynotus atlanticus* Forest, 1957 from the Syrian Marine water.

2. MATERIALS AND METHODS

One male Specimen of *Brachynotus atlanticus* was collected from of Al-shokaifat area from (35°25'37.7"N 35°54'28.8"E) (Fig. 1) by hand from the sandy gravel shore (on depth 0.00). The specimen was classified and described according to the (Kee, 2007). Nomenclature follows WoRMS Editorial Board (2019) (WoRMS, 2019).

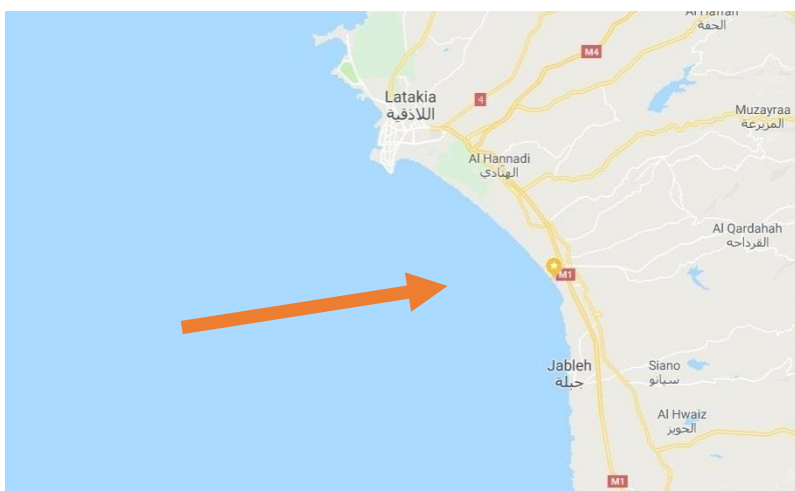


Figure 1 A map for the Syrian coast with the location of the sampling site.

Classification

kingdom: Animalia; phylum: Arthropoda; class: Malacostraca; order: Decapoda; family: Varunidae; genus: *Brachynotus*

3. DESCRIPTION

The carapace of *Brachynotus atlanticus* was characterized by its quadrangular shape and the unique frontal concave between the orbitals. Anterolateral margins have three teeth including exorbital tooth, carpus is broad and larger than merus from the dorsal view, the size of chelipedis (1.4-1.5 cm) in length (as the length of the carapace), chelipeds fingers short. Base of cheliped fingers is without distinct pulvinus. dactylus has two teeth, while the fixed finger seems to has 3 teeth (Figure 2-a & b). Most of the walking legs were missing in the specimen. Infra-orbital ridge with two distinct granules are in below orbit (Figure 3). The carapace is dark brown and the cheliped resemble a lighter color and beige.

Size of specimen

The size of male specimen was: CW: 1.4 cm, CL: 1.3 cm.



Figure 2 Dorsal view (a) and Ventral view (b) of *Brachynotus atlanticus* Forest, 1957 (male) from Syrian coast.



Figure 3 Anterior view of *Brachynotus atlanticus* Forest, 1957 from Syrian coast.

4. DISCUSSION

Brachynotus is a genus of crabs, comprising the following six species: *Brachynotus atlanticus* Forest, 1957, *Brachynotus foresti* Zariquiey Alvarez, 1968, *Brachynotus gemmellaroi* (Rizza, 1839), *Brachynotus marmoratus* (Olivi, 1792), *Brachynotus ssexdentatus* (Risso, 1827), *Brachynotus spinosus* (H. Milne-Edwards, 1853) (WoRMS, 2019). *Brachynotus atlanticus* is a western Atlantic species (Marco-Herrero et al., 2015) which was reported for Iberian waters in the Gulf of Cádiz (García Raso, 1985; González-Gordillo et al., 1990) and the Alboran Sea (García Raso, 1985) and located along the tidal region of the Atlantic coasts of North Africa and southern Europe extending to the Western Mediterranean (Schubart et al., 2001; Moraitou-Apostolopoulou, 2013). This species was observed in Spain, Morocco and Portugal since 1974 according to GBIF Secretariat (2019) until 2017 (Abello, 2019). None of the previous studies indicate the presence of *Brachynotus atlanticus* in the Eastern Mediterranean Basin.

It is the first occurrence of this species in this part of the Mediterranean Sea and this is particularly important, although there is no clear explanation for the reason for its existence in the region, knowing that the area lies to the south of Latakia commercial port and it is about 19 km away.

Certainly, there is a need for further research and monitoring on how *B. atlanticus* expand beyond and the possibility to register more tropical Atlantic species in the eastern Mediterranean in order to predict the formation of biota composition and consequences.

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